**Lampiran 1 Surat keterangan hasil determinasi rimpang kunyit**

**KEMENTERIAN KESEHATAN REPUBLIK INDONESIA**
**BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN**
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
TANAMAN OBAT DAN OBAT TRADISIONAL
Jalan Lawu No.11 Tawamangu, Karanganyar, Jawa Tengah 57792
Telepon (0271) 697 010 Faksimile (0271) 697 451
Laman b2p2toot.litbang.kemkes.go.id Surat Elektronik b2p2toot@litbang.kemkes.go.id

Nomor : KM.04.02/2/2791/2021 07 Desember 2021
Lampiran : -
Hal : Keterangan Determinasi

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
Jalan Letjend. Sutoyo Solo 57127

Merujuk surat Saudara nomor: 478/H6-04/10.09.2021 tanggal 10 September 2021 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

| | |
|---|---|
| Nama Pemohon | : Nurul Angizah |
| Nama Sampel | : Kunyit |
| Sampel | : Segar |
| Spesies | : *Curcuma longa* L. |
| Sinonim | : *Curcuma domestica* Valeton |
| Familia | : Zingiberaceae |
| Penanggung Jawab | : Nur Rahmawati Wijaya, S.Si. |

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

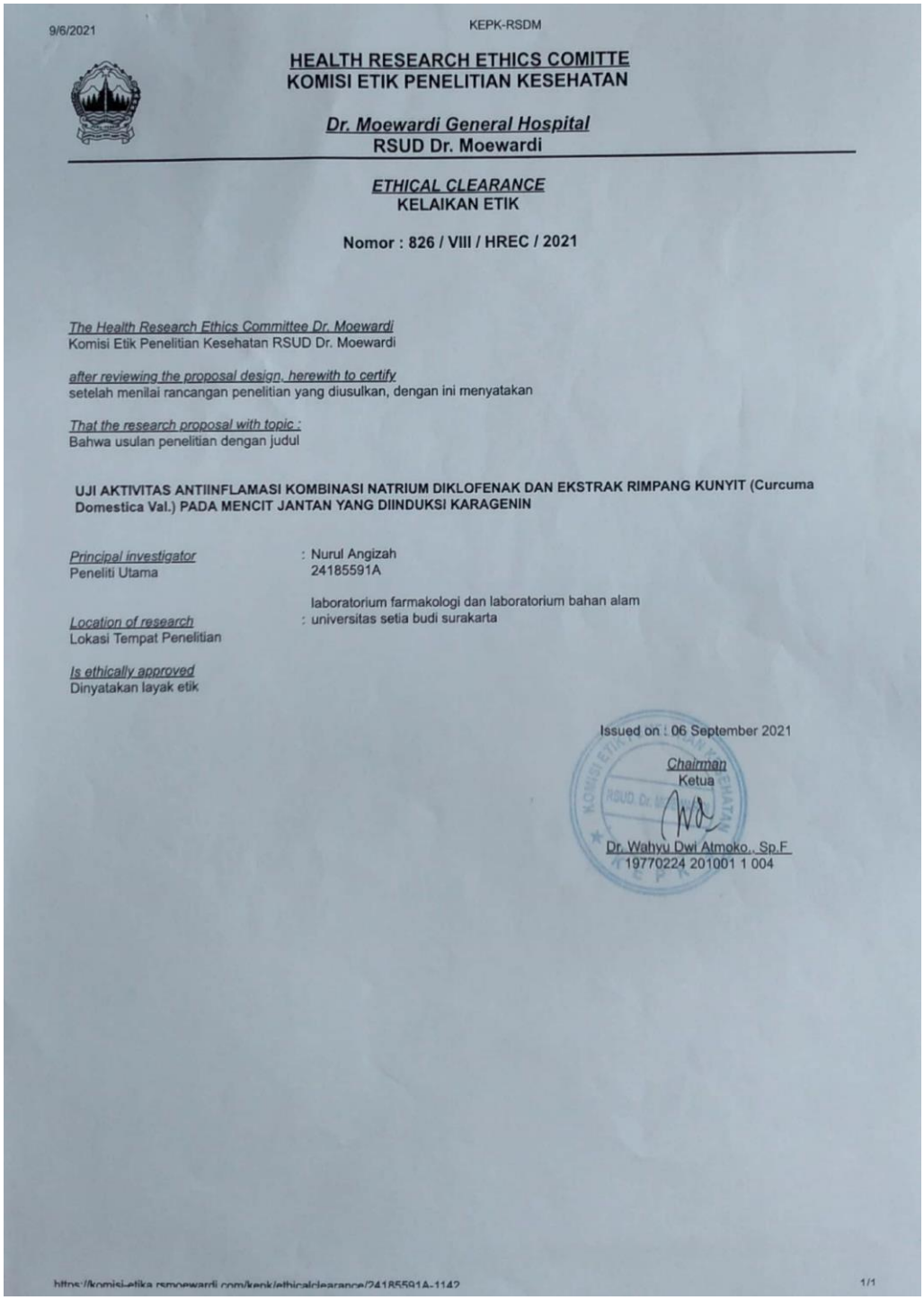
Kepala Balai Besar Penelitian
dan Pengembangan Tanaman Obat
dan Obat Tradisional
Tawangmangu,

**Akhmad Saikhu, S.K.M., M.Sc.PH.**

Tembusan :
-

Dokumen ini ditandatangani secara elektronik melalui Aplikasi TNDE menggunakan sertifikat elektronik yang diterbitkan oleh BSrE. (1/1)

## Lampiran 2. Surat keterangan ethical clearence



9/6/2021 KEPK-RSDM

**HEALTH RESEARCH ETHICS COMITTE**
**KOMISI ETIK PENELITIAN KESEHATAN**

***Dr. Moewardi General Hospital***
**RSUD Dr. Moewardi**

***ETHICAL CLEARANCE***
**KELAIKAN ETIK**

**Nomor : 826 / VIII / HREC / 2021**

*The Health Research Ethics Committee Dr. Moewardi*
Komisi Etik Penelitian Kesehatan RSUD Dr. Moewardi

*after reviewing the proposal design, herewith to certify*
setelah menilai rancangan penelitian yang diusulkan, dengan ini menyatakan

*That the research proposal with topic :*
Bahwa usulan penelitian dengan judul

**UJI AKTIVITAS ANTIINFLAMASI KOMBINASI NATRIUM DIKLOFENAK DAN EKSTRAK RIMPANG KUNYIT (Curcuma Domestica Val.) PADA MENCIT JANTAN YANG DIINDUKSI KARAGENIN**

*Principal investigator* : Nurul Angizah
Peneliti Utama 24185591A

*Location of research* : laboratorium farmakologi dan laboratorium bahan alam universitas setia budi surakarta
Lokasi Tempat Penelitian

*Is ethically approved*
Dinyatakan layak etik

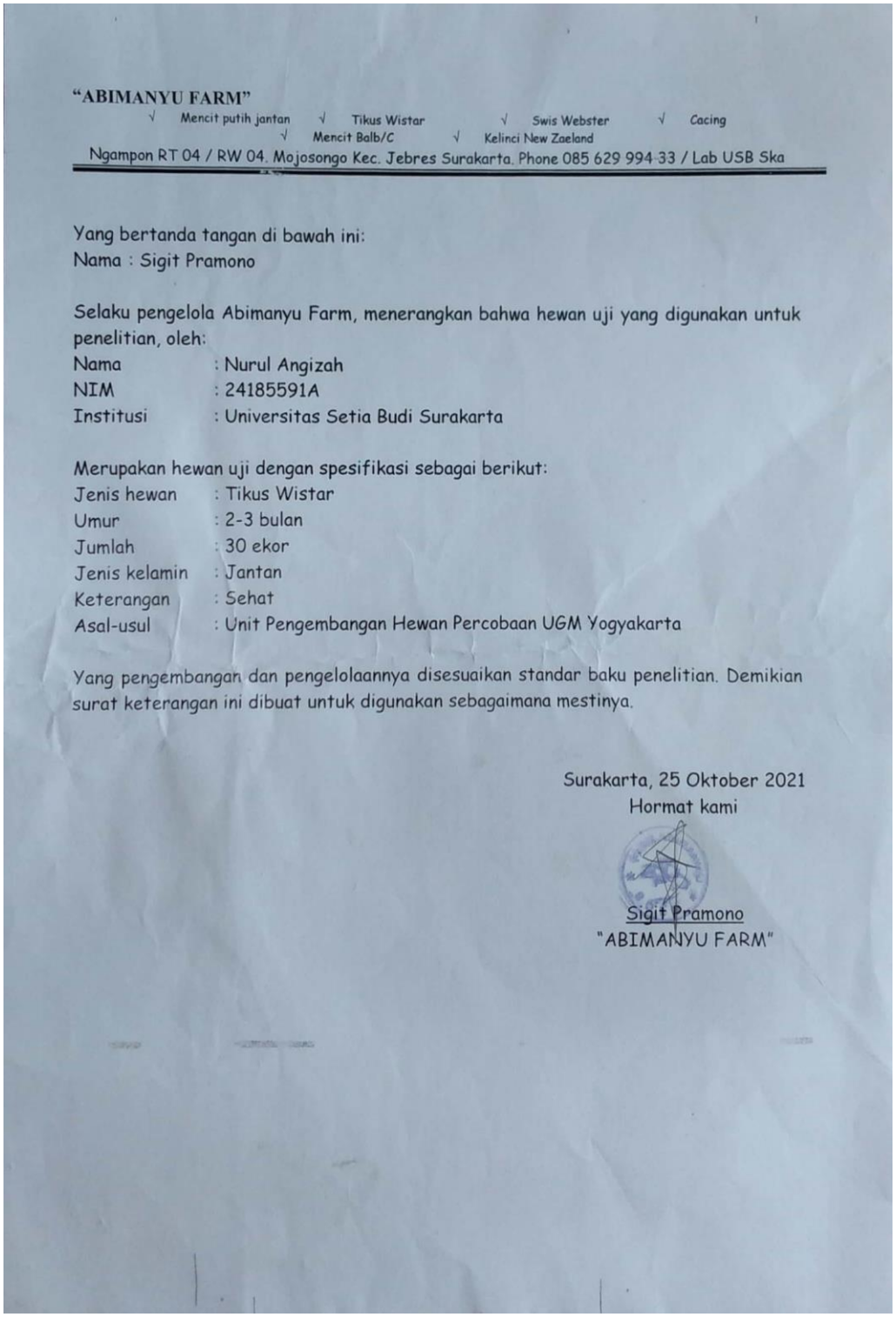
Issued on : 06 September 2021

*Chairman*
Ketua

Dr. Wahyu Dwi Atmoko., Sp.F
19770224 201001 1 004

https://komisi-etika.rsmoewardi.com/kepk/ethicalclearance/24185591A-1142 1/1

**Lampiran 3. Surat keterangan hewan uji**



"ABIMANYU FARM"

√ Mencit putih jantan √ Tikus Wistar √ Swis Webster √ Cacing
√ Mencit Balb/C √ Kelinci New Zaeland

Ngampon RT 04 / RW 04. Mojosongo Kec. Jebres Surakarta. Phone 085 629 994 33 / Lab USB Ska

Yang bertanda tangan di bawah ini:
Nama : Sigit Pramono

Selaku pengelola Abimanyu Farm, menerangkan bahwa hewan uji yang digunakan untuk penelitian, oleh:

| | |
|---|---|
| Nama | : Nurul Angizah |
| NIM | : 24185591A |
| Institusi | : Universitas Setia Budi Surakarta |

Merupakan hewan uji dengan spesifikasi sebagai berikut:

| | |
|---|---|
| Jenis hewan | : Tikus Wistar |
| Umur | : 2-3 bulan |
| Jumlah | : 30 ekor |
| Jenis kelamin | : Jantan |
| Keterangan | : Sehat |
| Asal-usul | : Unit Pengembangan Hewan Percobaan UGM Yogyakarta |

Yang pengembangan dan pengelolaannya disesuaikan standar baku penelitian. Demikian surat keterangan ini dibuat untuk digunakan sebagaimana mestinya.

Surakarta, 25 Oktober 2021
Hormat kami

Sigit Pramono
"ABIMANYU FARM"

**Lampiran 4. Foto pengolahan simplisia**

Tanaman rimpang kunyit

Rimpang kunyit

Serbuk rimpang kunyit

Proses maserasi

Pemekatan dengan *rotary evaporator*

Ekstrak rimpang kunyit

**Lampiran 5. Perhitungan rendemen rimpang kunyit**

1. Rendemen rimpang kunyit kering terhadap rimpang kunyit basah

$$\% \text{ rendemen kering terhadap bobot basah} = \frac{bobot\ simplisa}{bobot\ simplisia\ segar} \times 100\%$$

$$= \frac{1200\ g}{5000\ g} \times 100\%$$

$$= 24\%$$

2. Rendemen ekstrak etanol terhadap serbuk kering

$$\% \text{ rendemen ekstrak rimpang kunyit} = \frac{bobot\ ekstrak}{bobot\ serbuk\ simplisia} \times 100\%$$

$$= \frac{34\ g}{200\ g}$$

$$= 17\%$$

**Lampiran 6. Foto Penetapan kadar air metode moisture balance**

Penimbangan uji susut pengeringan

Hasil uji susut pengeringan replikasi I

Hasil uji susut pengeringan replikasi II

Hasil uji susut pengeringan replikasi III

**Lampiran 7. Foto Kadar air simplisia metode sterling bidwell**

Rangkaian alat uji kadar air destilasi

Hasil uji kadar air replikasi I

Hasil uji kadar air replikasi II

Hasil uji kadar air replikasi III

**Lampiran 8. Perhitungan kadar air**

Kadar air simplisia metode sterling bidwell

% kadar air = $\frac{volume\ air\ terbaca}{bobot\ sampel}$ x 100%

Replikasi 1 = $\frac{1{,}8\ ml}{20{,}8759\ g}$ x 100 %

= 8,62 %

Replikasi II = $\frac{1{,}7\ ml}{20{,}7054\ g}$ x 100%

= 8,21 %

Replikasi III = $\frac{1{,}5\ ml}{20{,}9311\ g}$ x 100%

= 7,16 %

Rata-rata kadar air = $\frac{8{,}62\ \% + 8{,}21\ \% + 7{,}16\ \%}{3}$ = 7,99%

**Lampiran 9. Foto Kadar ekstrak etanol rimpang metode gravimetri**

Pemanasan dalam oven metode gravimetri

Desikator

**Lampiran 10. Kadar ekstrak etanol rimpang metode gravimetri**

% kadar air=$\frac{bobot\ bahan\ awal\ sebelum\ dikeringkan - bobot\ bahan\ setelah\ dikeringkan}{bobot\ bahan\ awal\ sebelum\ dikeringkan}$x 100%

Replikasi I = $\frac{7{,}1304\ g - 6{,}4918\ g}{7{,}1304\ g}$ x 100%

= 8,95%

Replikasi II = $\frac{6{,}9873\ g - 6{,}3730\ g}{6{,}9873\ g}$ x 100%

= 8,79%

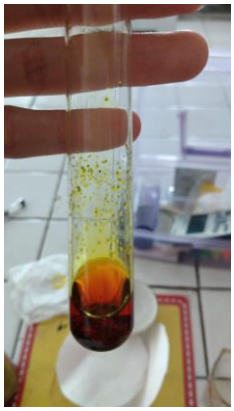
Replikasi III = $\frac{7{,}0566\ g - 6{,}4481\ g}{7{,}0566\ g}$ x 100%

= 8,62%

Rata-rata % kadar air = $\frac{8{,}95\ \% + 8{,}79\ \% + 8{,}62\ \%}{3}$ = 8,79 %

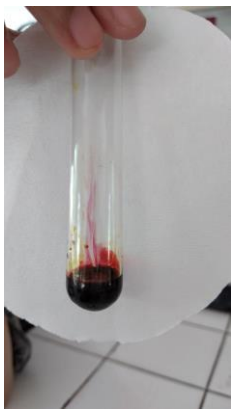
**Lampiran 11. Hasil identifikasi kimia ekstrak**

Alkaloid



Flavonoid

Saponin



Triterpenoid

Tanin

**Lampiran 12. Perhitungan uji KLT**

Rf pembanding curcumin

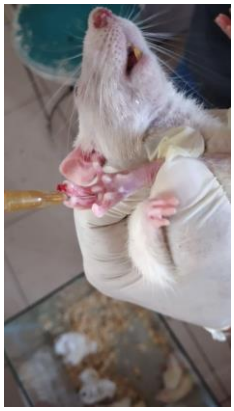
$$Rf = \frac{jarak\ tempuh\ sampel}{jarak\ tempuh\ eluen} = = \frac{4{,}8\ cm}{6{,}5\ cm} = 0{,}74$$

Rf sampel ekstrak rimpang kunyit

$$Rf = \frac{jarak\ tempuh\ sampel}{jarak\ tempuh\ eluen} == \frac{4{,}8\ cm}{6{,}5\ cm} = 0{,}74$$

**Lampiran 13. Foto Pengujian antiinflamasi**

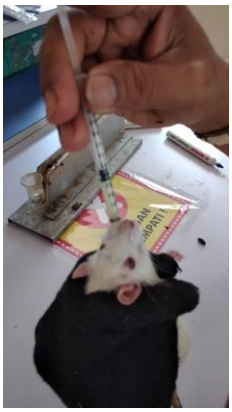
Sediaan uji



Induksi karagenan pada kaki tikus

Volume kaki tikus sebelum diinduksi karagenan

Volume kaki tikus sesudah diinduksi karagenan



Induksi sediaan uji per oral

Pengukuran volume edema dengan pletismometer

**Lampiran 14. Perhitungan dosis**

**1. Kontrol negatif 0,5%**

Menimbang 0,5 g CMC-Na dilarutkan kedalam air suling (70℃) ad 100 ml. volume pemberian 0,5 ml/tikus

**2. Kontrol positif I Natrium diklofenak 4,5 mg/kg BB tikus = 1,8 mg/200 g BB Tikus**

Replikasi I 180 g BB Tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1{,}62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi II 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1{,}8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

Replikasi III 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 1,8 mg = 1,71 mg/190 g BB tikus

Volume pemberian $\frac{1{,}71\ mg}{10mg/ml}$ = 0,171 ml/190 g BB tikus

Replikasi IV 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1{,}8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

Replikasi V 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1{,}8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

3. Kontrol positif II Ekstrak rimpang kunyit 400 mg/kg BB tikus = 80 mg/200 g BB tikus

Replikasi I 200 g BB tikus = 80 mg/200 g BB tikus

Volume pemberian = $\frac{80\ mg}{30\ mg/ml}$ =2,66 ml/200 g BB tikus

Replikasi II 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 80 mg = 76 mg/190 g BB tikus

Volume pemberian = $\frac{76\ mg}{30\ mg/ml}$ = 2,53 ml/ 190 g BB tikus

Replikasi III 200 g BB tikus = 80 mg/200 g BB tikus

Volume pemberian = $\frac{80\ mg}{30\ mg/ml}$ =2,66 ml/200 g BB tikus

Replikasi IV 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 80 mg = 72 mg/180 g BB tikus

Volume pemberian = $\frac{72\ mg}{30\ mg/ml}$ = 2,4 ml/ 180 g BB tikus

Replikasi V 200 g BB tikus = 80 mg/200 g BB tikus

Volume pemberian = $\frac{80\ mg}{30\ mg/ml}$ =2,66 ml/200 g BB tikus

**4. Kelompok kombinasi I**

**Natrium diklofenak 1,8 mg/200 g BB tikus**

Replikasi I 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 1,8 mg = 1,71 mg/190 g BB tikus

Volume pemberian $\frac{1,71\ mg}{10mg/ml}$ = 0,171 ml/190 g BB tikus

Replikasi II 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi III 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi IV 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1,8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

Replikasi V 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

**Ekstrak rimpang kunyit 20 mg/200 g BB tikus**

Replikasi I 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 20 mg = 19 mg/190 g BB tikus

Volume pemberian = $\frac{19\ mg}{30\ mg/ml}$ = 0,6 ml/ 190 g BB tikus

Replikasi II 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 20 mg = 18 mg/180 g BB tikus

Volume pemberian = $\frac{18\ mg}{30\ mg/ml}$ = 0,6 ml/ 180 g BB tikus

Replikasi III 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 20 mg = 18 mg/180 g BB tikus

Volume pemberian = $\frac{18\ mg}{30\ mg/ml}$ = 0,6 ml/ 180 g BB tikus

Replikasi IV 200 g BB tikus = 20 mg/200 g BB tikus

Volume pemberian = $\frac{20\ mg}{30\ mg/ml}$ = 0,66 ml/200 g BB tikus

Replikasi V 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 20 mg = 18 mg/180 g BB tikus

Volume pemberian = $\frac{18\ mg}{30\ mg/ml}$ = 0,6 ml/ 180 g BB tikus

**5. Kelompok kombinasi II**

**Natrium diklofenak 4,5 mg/kg BB = 1,8 mg/200 g BB tikus**

Replikasi I 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 1,8 mg = 1,71 mg/190 g BB tikus

Volume pemberian $\frac{1,71\ mg}{10mg/ml}$ = 0,171 ml/190 g BB tikus

Replikasi II 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1,8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

Replikasi III 180 g BB Tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi IV 180 g BB Tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi V 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1,8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

**Ekstrak rimpang kunyit 200 mg/kg BB = 40 mg/200 g BB tikus**

Replikasi I 190 g BB tikus = $\frac{190\ g}{200\ g}$ x 40 mg = 38 mg/190 g BB tikus

Volume pemberian = $\frac{38\ mg}{30\ mg/ml}$ = 1,26 ml/ 190 g BB tikus

Replikasi II 200 g BB tikus = 40 mg/200 g BB tikus

Volume pemberian = $\frac{40\ mg}{30\ mg/ml}$ = 1,33 ml/ 200 g BB tikus

Replikasi III 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 40 mg = 36 mg/180 g BB tikus

Volume pemberian = $\frac{36\ mg}{30\ mg/ml}$ = 1,2 ml/ 180 g BB tikus

Replikasi IV 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 40 mg = 36 mg/180 g BB tikus

Volume pemberian = $\frac{36\ mg}{30\ mg/ml}$ = 1,2 ml/ 180 g BB tikus

Replikasi V 200 g BB tikus = 40 mg/200 g BB tikus

Volume pemberian = $\frac{40\ mg}{30\ mg/ml}$ = 1,33 ml/ 200 g BB tikus

**6. Kelompok kombinasi III**

**Natrium diklofenak 4,5 mg/kg BB = 1,8 mg/200 g BB tikus**

Replikasi I 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi II 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi III 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 1,8 mg = 1,62 mg/ 180 g BB tikus

Volume pemberian = $\frac{1,62\ mg}{10mg/ml}$ = 0,162 ml/ 180 g BB tikus

Replikasi IV 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1,8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

Replikasi V 200 g BB tikus = 1,8 mg/ 200 g BB tikus

Volume pemberian = $\frac{1,8\ mg}{10mg/ml}$ = 0,18 ml/200 g BB tikus

**Ekstrak rimpang kunyit 400 mg/kg BB = 80 mg/200 g BB tikus**

Replikasi I 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 80 mg = 72 mg/180 g BB tikus

Volume pemberian = $\frac{72\ mg}{30\ mg/ml}$ = 2,4 ml/ 180 g BB tikus

Replikasi II 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 80 mg = 72 mg/180 g BB tikus

Volume pemberian = $\frac{72\ mg}{30\ mg/ml}$ = 2,4 ml/ 180 g BB tikus

Replikasi III 180 g BB tikus = $\frac{180\ g}{200\ g}$ x 80 mg = 72 mg/180 g BB tikus

Volume pemberian = $\frac{72\ mg}{30\ mg/ml}$ = 2,4 ml/ 180 g BB tikus

Replikasi IV 200 g 200 g BB tikus = 80 mg/200 g BB tikus

Volume pemberian = $\frac{80\ mg}{30\ mg/ml}$ =2,66 ml/200 g BB tikus

Replikasi V 200 g 200 g BB tikus = 80 mg/200 g BB tikus

Volume pemberian = $\frac{80\ mg}{30\ mg/ml}$ =2,66 ml/200 g BB tikus

**Lampiran 15. Hasil uji metode karagenan**

**1. Sebelum dikurangi T0**

| Perlakuan | Replikasi | Volume edema (ml) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | T0 | T0,5 | T1 | T2 | T3 | T4 | T5 | T6 |
| Kontrol negatif CMC-Na | 1 | 0.015 | 0.045 | 0.05 | 0.04 | 0.04 | 0.045 | 0.045 | 0.045 |
| | 2 | 0.01 | 0.045 | 0.055 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| | 3 | 0.015 | 0.04 | 0.04 | 0.05 | 0.045 | 0.04 | 0.04 | 0.04 |
| | 4 | 0.01 | 0.05 | 0.045 | 0.045 | 0.045 | 0.045 | 0.045 | 0.045 |
| | 5 | 0.01 | 0.045 | 0.045 | 0.045 | 0.045 | 0.045 | 0.045 | 0.04 |
| | Rata-rata | 0.012 | 0.045 | 0.047 | 0.046 | 0.045 | 0.045 | 0.045 | 0.044 |
| | SD | 0.002739 | 0.003536 | 0.005701 | 0.004183 | 0.003536 | 0.003536 | 0.003536 | 0.004183 |
| Kontrol positif natrium diklofenak | 1 | 0.015 | 0.045 | 0.04 | 0.03 | 0.03 | 0.025 | 0.02 | 0.02 |
| | 2 | 0.01 | 0.04 | 0.035 | 0.03 | 0.03 | 0.03 | 0.03 | 0.025 |
| | 3 | 0.01 | 0.035 | 0.035 | 0.035 | 0.03 | 0.025 | 0.03 | 0.03 |
| | 4 | 0.01 | 0.035 | 0.035 | 0.03 | 0.025 | 0.025 | 0.03 | 0.02 |
| | 5 | 0.015 | 0.045 | 0.04 | 0.035 | 0.03 | 0.03 | 0.02 | 0.015 |
| | Rata-rata | 0.012 | 0.04 | 0.037 | 0.032 | 0.029 | 0.027 | 0.026 | 0.022 |
| | SD | 0.002739 | 0.005 | 0.002739 | 0.002739 | 0.002236 | 0.002739 | 0.005477 | 0.005701 |
| Kontrol positif ekstrak rimpang kunyit | 1 | 0.015 | 0.04 | 0.04 | 0.03 | 0.035 | 0.02 | 0.02 | 0.025 |
| | 2 | 0.01 | 0.04 | 0.04 | 0.035 | 0.035 | 0.03 | 0.025 | 0.02 |
| | 3 | 0.015 | 0.035 | 0.035 | 0.035 | 0.03 | 0.03 | 0.03 | 0.025 |
| | 4 | 0.01 | 0.04 | 0.04 | 0.03 | 0.03 | 0.025 | 0.03 | 0.02 |
| | 5 | 0.01 | 0.04 | 0.035 | 0.04 | 0.03 | 0.035 | 0.03 | 0.025 |
| | Rata-rata | 0.012 | 0.039 | 0.038 | 0.034 | 0.032 | 0.028 | 0.027 | 0.023 |
| | SD | 0.002739 | 0.002236 | 0.002739 | 0.004183 | 0.002739 | 0.005701 | 0.004472 | 0.002739 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dosis kombinasi I | 1 | 0.015 | 0.04 | 0.035 | 0.025 | 0.025 | 0.025 | 0.02 | 0.02 |
| | 2 | 0.01 | 0.04 | 0.035 | 0.03 | 0.025 | 0.025 | 0.02 | 0.02 |
| | 3 | 0.01 | 0.035 | 0.035 | 0.025 | 0.02 | 0.02 | 0.02 | 0.015 |
| | 4 | 0.01 | 0.035 | 0.035 | 0.025 | 0.02 | 0.02 | 0.02 | 0.015 |
| | 5 | 0.01 | 0.04 | 0.035 | 0.03 | 0.03 | 0.03 | 0.025 | 0.025 |
| | Rata-rata | 0.011 | 0.038 | 0.035 | 0.027 | 0.024 | 0.024 | 0.021 | 0.019 |
| | SD | 0.002236 | 0.002739 | 0 | 0.002739 | 0.004183 | 0.004183 | 0.002236 | 0.004183 |
| Dosis kombinasi II | 1 | 0.015 | 0.04 | 0.03 | 0.025 | 0.025 | 0.025 | 0.025 | 0.02 |
| | 2 | 0.01 | 0.04 | 0.035 | 0.03 | 0.025 | 0.02 | 0.02 | 0.015 |
| | 3 | 0.01 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.015 | 0.02 |
| | 4 | 0.015 | 0.04 | 0.035 | 0.025 | 0.02 | 0.02 | 0.02 | 0.02 |
| | 5 | 0.01 | 0.04 | 0.03 | 0.025 | 0.025 | 0.025 | 0.02 | 0.015 |
| | Rata-rata | 0.012 | 0.04 | 0.032 | 0.025 | 0.023 | 0.022 | 0.02 | 0.018 |
| | SD | 0.002739 | 0 | 0.002739 | 0.003536 | 0.002739 | 0.002739 | 0.003536 | 0.002739 |
| Dosis kombinasi III | 1 | 0.015 | 0.045 | 0.035 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 |
| | 2 | 0.01 | 0.03 | 0.02 | 0.015 | 0.015 | 0.02 | 0.02 | 0.02 |
| | 3 | 0.01 | 0.035 | 0.03 | 0.02 | 0.02 | 0.015 | 0.015 | 0.015 |
| | 4 | 0.01 | 0.035 | 0.025 | 0.02 | 0.02 | 0.02 | 0.015 | 0.015 |
| | 5 | 0.01 | 0.04 | 0.03 | 0.025 | 0.02 | 0.015 | 0.015 | 0.015 |
| | Rata-rata | 0.011 | 0.037 | 0.028 | 0.022 | 0.021 | 0.018 | 0.017 | 0.017 |
| | SD | 0.002236 | 0.005701 | 0.005701 | 0.005701 | 0.005477 | 0.002739 | 0.002739 | 0.002739 |

**2. Sesudah dikurangi T0**

| Perlakuan | Replikasi | T0 | T0.5 | T1 | T2 | T3 | T4 | T5 | T6 | AUCtotal | % DAI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Kontrol negatif CMC-Na | 1 | 0 | 0.03 | 0.035 | 0.025 | 0.025 | 0.03 | 0.03 | 0.03 | 0.16625 | - |
| | 2 | 0 | 0.035 | 0.045 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.23125 | - |
| | 3 | 0 | 0.025 | 0.025 | 0.035 | 0.03 | 0.025 | 0.025 | 0.025 | 0.15875 | - |
| | 4 | 0 | 0.04 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.20375 | - |
| | 5 | 0 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.035 | 0.03 | 0.19875 | - |
| | Rata-rata | 0 | 0.033 | 0.035 | 0.034 | 0.033 | 0.033 | 0.033 | 0.032 | 0.19175 | - |
| | SD | 0 | 0.005701 | 0.007071 | 0.005477 | 0.005701 | 0.005701 | 0.005701 | 0.005701 | 0.029549 | - |
| Kontrol positif natrium diklofenak | 1 | 0 | 0.03 | 0.025 | 0.015 | 0.015 | 0.01 | 0.005 | 0.005 | 0.08125 | 51.12782 |
| | 2 | 0 | 0.03 | 0.025 | 0.02 | 0.02 | 0.02 | 0.02 | 0.015 | 0.12125 | 47.56757 |
| | 3 | 0 | 0.025 | 0.025 | 0.025 | 0.02 | 0.015 | 0.02 | 0.02 | 0.12125 | 23.62205 |
| | 4 | 0 | 0.025 | 0.025 | 0.02 | 0.015 | 0.015 | 0.02 | 0.01 | 0.10625 | 47.85276 |
| | 5 | 0 | 0.03 | 0.025 | 0.02 | 0.015 | 0.015 | 0.005 | 0 | 0.08875 | 55.34591 |
| | rata2 | 0 | 0.028 | 0.025 | 0.02 | 0.017 | 0.015 | 0.014 | 0.01 | 0.10375 | 45.10322 |
| | SD | 0 | 0.002739 | 0 | 0.003536 | 0.002739 | 0.003536 | 0.008216 | 0.007906 | 0.018371 | 12.41252 |
| Kontrol positif ekstrak rimpang kunyit | 1 | 0 | 0.025 | 0.025 | 0.015 | 0.02 | 0.005 | 0.005 | 0.01 | 0.08125 | 51.12782 |
| | 2 | 0 | 0.03 | 0.03 | 0.025 | 0.025 | 0.02 | 0.015 | 0.01 | 0.1275 | 44.86486 |
| | 3 | 0 | 0.02 | 0.02 | 0.02 | 0.015 | 0.015 | 0.015 | 0.01 | 0.095 | 40.15748 |
| | 4 | 0 | 0.03 | 0.03 | 0.02 | 0.02 | 0.015 | 0.02 | 0.01 | 0.1175 | 42.33129 |
| | 5 | 0 | 0.03 | 0.025 | 0.03 | 0.02 | 0.025 | 0.02 | 0.015 | 0.13625 | 31.44654 |
| | rata2 | 0 | 0.027 | 0.026 | 0.022 | 0.02 | 0.016 | 0.015 | 0.011 | 0.1115 | 41.9856 |
| | SD | 0 | 0.004472 | 0.004183 | 0.005701 | 0.003536 | 0.007416 | 0.006124 | 0.002236 | 0.022869 | 7.183377 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dosis kombinasi I | 1 | 0 | 0.025 | 0.02 | 0.01 | 0.01 | 0.01 | 0.005 | 0.005 | 0.065 | 60.90226 |
| | 2 | 0 | 0.03 | 0.025 | 0.02 | 0.015 | 0.015 | 0.01 | 0.01 | 0.09875 | 57.2973 |
| | 3 | 0 | 0.025 | 0.025 | 0.015 | 0.01 | 0.01 | 0.01 | 0.005 | 0.07875 | 50.3937 |
| | 4 | 0 | 0.025 | 0.025 | 0.015 | 0.01 | 0.01 | 0.01 | 0.005 | 0.07875 | 61.34969 |
| | 5 | 0 | 0.03 | 0.025 | 0.02 | 0.02 | 0.02 | 0.015 | 0.015 | 0.11625 | 41.50943 |
| | rata2 | 0 | 0.027 | 0.024 | 0.016 | 0.013 | 0.013 | 0.01 | 0.008 | 0.0875 | 54.29048 |
| | SD | 0 | 0.002739 | 0.002236 | 0.004183 | 0.004472 | 0.004472 | 0.003536 | 0.004472 | 0.020078 | 8.383452 |
| Dosis kombinasi II | 1 | 0 | 0.025 | 0.015 | 0.01 | 0.01 | 0.01 | 0.01 | 0.005 | 0.06625 | 60.15038 |
| | 2 | 0 | 0.03 | 0.025 | 0.02 | 0.015 | 0.01 | 0.01 | 0.005 | 0.09125 | 60.54054 |
| | 3 | 0 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.005 | 0.01 | 0.07 | 55.90551 |
| | 4 | 0 | 0.025 | 0.02 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.055 | 73.00613 |
| | 5 | 0 | 0.03 | 0.02 | 0.015 | 0.015 | 0.015 | 0.01 | 0.005 | 0.0875 | 55.97484 |
| | rata2 | 0 | 0.028 | 0.02 | 0.013 | 0.011 | 0.01 | 0.008 | 0.006 | 0.074 | 61.11548 |
| | SD | 0 | 0.002739 | 0.003536 | 0.004472 | 0.004183 | 0.003536 | 0.002739 | 0.002236 | 0.01514 | 7.00392 |
| Dosis kombinasi II | 1 | 0 | 0.03 | 0.02 | 0.015 | 0.015 | 0.005 | 0.005 | 0.005 | 0.0725 | 56.39098 |
| | 2 | 0 | 0.02 | 0.01 | 0.005 | 0.005 | 0.01 | 0.01 | 0.01 | 0.0525 | 77.2973 |
| | 3 | 0 | 0.025 | 0.02 | 0.01 | 0.01 | 0.005 | 0.005 | 0.005 | 0.06 | 62.20472 |
| | 4 | 0 | 0.025 | 0.015 | 0.01 | 0.01 | 0.01 | 0.005 | 0.005 | 0.06125 | 69.93865 |
| | 5 | 0 | 0.03 | 0.02 | 0.015 | 0.01 | 0.005 | 0.005 | 0.005 | 0.0675 | 66.03774 |
| | rata2 | 0 | 0.026 | 0.017 | 0.011 | 0.01 | 0.007 | 0.006 | 0.006 | 0.06275 | 66.37388 |
| | SD | 0 | 0.004183 | 0.004472 | 0.004183 | 0.003536 | 0.002739 | 0.002236 | 0.002236 | 0.007624 | 7.892747 |

**Lampiran 16. Hasil perhitungan AUC**

**1. Kontrol negatif**

**Replikasi 1**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,035}{2}$ (1-0,5) = 0,01625

$AUC_1^2$= $\frac{0,035+0,025}{2}$ (2-1) = 0,03

$AUC_2^3$= $\frac{0,025+0,025}{2}$ (3-2) = 0,025

$AUC_3^4$= $\frac{0,025+0,03}{2}$ (4-3) = 0,0275

$AUC_4^5$= $\frac{0,03+0,03}{2}$ (5-4) = 0,03

$AUC_5^6$= $\frac{0,03+0,03}{2}$ (6-5) = 0,03

AUC total = 0,16625

**Replikasi II**

$AUC_0^{0,5}$= $\frac{0+0,035}{2}$ (0,5-0) = 0,00875

$AUC_{0,5}^{1}$= $\frac{0,035+0,045}{2}$ (1-0,5) = 0,02

$AUC_1^2$= $\frac{0,045+0,04}{2}$ (2-1) = 0,0425

$AUC_2^3$= $\frac{0,04+0,04}{2}$ (3-2) = 0,04

$AUC_3^4$= $\frac{0,04+0,04}{2}$ (4-3) = 0,04

$AUC_4^5$= $\frac{0,04+0,04}{2}$ (5-4) = 0,04

$AUC_5^6$= $\frac{0,04+0,04}{2}$ (6-5) = 0,04

AUC total = 0,23125

**Replikasi III**

$AUC_0^{0,5}$= $\frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1}$= $\frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2$= $\frac{0,025+0,035}{2}$ (2-1) = 0,03

$AUC_2^3$= $\frac{0,035+0,03}{2}$ (3-2) = 0,0325

$AUC_3^4$= $\frac{0,03+0,025}{2}$ (4-3) = 0,0275

$AUC_4^5$= $\frac{0,025+0,025}{2}$ (5-4) = 0,025

$AUC_5^6$= $\frac{0,025+0,025}{2}$ (6-5) = 0,025

AUC total = 0.15875

**Replikasi IV**

$AUC_0^{0,5}$= $\frac{0+0,04}{2}$ (0,5-0) = 0,01

$AUC_{0,5}^{1}$= $\frac{0,04+0,035}{2}$ (1-0,5) = 0,01875

$AUC_1^2$= $\frac{0,035+0,035}{2}$ (2-1) = 0,035

$AUC_2^3$= $\frac{0,035+0,035}{2}$ (3-2) = 0,035

$AUC_3^4$= $\frac{0,035+0,035}{2}$ (4-3) = 0,035

$AUC_4^5$= $\frac{0,035+0,035}{2}$ (5-4) = 0,035

$AUC_5^6$= $\frac{0,035+0,035}{2}$ (6-5) = 0,035

AUC total = 0.20375

**Replikasi V**

$AUC_0^{0,5}$= $\frac{0+0,035}{2}$ (0,5-0) = 0,00875

$AUC_{0,5}^{1}$= $\frac{0,035+0,035}{2}$ (1-0,5) = 0,0175

$AUC_1^2$= $\frac{0,035+0,035}{2}$ (2-1) = 0,035

$AUC_2^3$= $\frac{0,035+0,035}{2}$ (3-2) = 0,035

$AUC_3^4$= $\frac{0,035+0,035}{2}$ (4-3) = 0,035

$AUC_4^5$= $\frac{0,035+0,035}{2}$ (5-4) = 0,035

$AUC_5^6$= $\frac{0,035+0,03}{2}$ (6-5) = 0,0325

AUC total = 0,19875

**2. Kontrol positif natrium diklofenak**

**Replikasi I**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2$= $\frac{0,025+0,015}{2}$ (2-1) = 0,02

$AUC_2^3$= $\frac{0,015+0,015}{2}$ (3-2) = 0,015

$AUC_3^4$= $\frac{0,015+0,01}{2}$ (4-3) = 0,0125

$AUC_4^5$= $\frac{0,01+0,005}{2}$ (5-4) = 0,0075

$AUC_5^6$= $\frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.08125

**Replikasi II**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2$= $\frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3$= $\frac{0,02+0,02}{2}$ (3-2) = 0,02

$AUC_3^4$= $\frac{0,02+0,02}{2}$ (4-3) = 0,02

$AUC_4^5$= $\frac{0,02+0,02}{2}$ (5-4) = 0,02

$AUC_5^6$= $\frac{0,02+0,015}{2}$ (6-5) = 0,0175

AUC total = 0.12125

**Replikasi III**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,025+0,025}{2}$ (2-1) = 0,025

$AUC_2^3 = \frac{0,025+0,02}{2}$ (3-2) = 0,0225

$AUC_3^4 = \frac{0,02+0,015}{2}$ (4-3) = 0,0175

$AUC_4^5 = \frac{0,015+0,02}{2}$ (5-4) = 0,0175

$AUC_5^6 = \frac{0,02+0,02}{2}$ (6-5) = 0,02

AUC total = 0.12125

**Replikasi IV**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3 = \frac{0,02+0,015}{2}$ (3-2) = 0,0175

$AUC_3^4 = \frac{0,015+0,015}{2}$ (4-3) = 0,015

$AUC_4^5 = \frac{0,015+0,02}{2}$ (5-4) = 0,0175

$AUC_5^6 = \frac{0,02+0,01}{2}$ (6-5) = 0,015

AUC total = 0.1062

**Replikasi V**

$AUC_0^{0,5} = \frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1} = \frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2 = \frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3 = \frac{0,02+0,015}{2}$ (3-2) = 0,0175

$AUC_3^4 = \frac{0,015+0,015}{2}$ (4-3) = 0,015

$AUC_4^5 = \frac{0,015+0,005}{2}$ (5-4) = 0,01

$AUC_5^6 = \frac{0,005+0}{2}$ (6-5) = 0,0025

AUC total = 0.08875

**3. Kontrol positif ekstrak rimpang kunyit**

**Replikasi I**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,025+0,015}{2}$ (2-1) = 0,02

$AUC_2^3 = \frac{0,015+0,02}{2}$ (3-2) = 0,0175

$AUC_3^4 = \frac{0,02+0,005}{2}$ (4-3) = 0,0125

$AUC_4^5 = \frac{0,005+0,005}{2}$ (5-4) = 0,005

$AUC_5^6 = \frac{0,005+0,01}{2}$ (6-5) = 0,0075

AUC total = 0.08125

**Replikasi II**

$AUC_0^{0,5} = \frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1} = \frac{0,03+0,03}{2}$ (1-0,5) = 0,015

$AUC_1^2 = \frac{0,03+0,025}{2}$ (2-1) = 0,0275

$AUC_2^3 = \frac{0,025+0,025}{2}$ (3-2) = 0,025

$AUC_3^4 = \frac{0,025+0,02}{2}$ (4-3) = 0,0225

$AUC_4^5 = \frac{0,02+0,015}{2}$ (5-4) = 0,0175

$AUC_5^6 = \frac{0,015+0,01}{2}$ (6-5) = 0,0125

AUC total = 0.1275

**Replikasi III**

$AUC_0^{0,5} = \frac{0+0,02}{2}$ (0,5-0) = 0,005

$AUC_{0,5}^{1} = \frac{0,02+0,02}{2}$ (1-0,5) = 0,01

$AUC_1^2 = \frac{0,02+0,02}{2}$ (2-1) = 0,02

$AUC_2^3 = \frac{0,02+0,015}{2}$ (3-2) = 0,0175

$AUC_3^4 = \frac{0,015+0,015}{2}$ (4-3) = 0,015

$AUC_4^5 = \frac{0,015+0,015}{2}$ (5-4) = 0,015

$AUC_5^6 = \frac{0,015+0,01}{2}$ (6-5) = 0,0125

AUC total = 0.095

**Replikasi IV**

$AUC_0^{0,5} = \frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1} = \frac{0,03+0,03}{2}$ (1-0,5) = 0,015

$AUC_1^2 = \frac{0,03+0,02}{2}$ (2-1) = 0,025

$AUC_2^3 = \frac{0,02+0,02}{2}$ (3-2) = 0,02

$AUC_3^4 = \frac{0,02+0,015}{2}$ (4-3) = 0,0175

$AUC_4^5 = \frac{0,015+0,02}{2}$ (5-4) = 0,0175

$AUC_5^6 = \frac{0,02+0,01}{2}$ (6-5) = 0,015

AUC total = 0.1175

**Replikasi V**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2$= $\frac{0,025+0,03}{2}$ (2-1) = 0,0275

$AUC_2^3$= $\frac{0,03+0,02}{2}$ (3-2) = 0,025

$AUC_3^4$= $\frac{0,02+0,025}{2}$ (4-3) = 0,0225

$AUC_4^5$= $\frac{0,025+0,02}{2}$ (5-4) = 0,0225

$AUC_5^6$= $\frac{0,02+0,015}{2}$ (6-5) = 0,0175

AUC total = 0.13625

**4. Dosis kombinasi I**

**Replikasi I**

$AUC_0^{0,5}$= $\frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1}$= $\frac{0,025+0,02}{2}$ (1-0,5) = 0,01125

$AUC_1^2$= $\frac{0,02+0,01}{2}$ (2-1) = 0,015

$AUC_2^3$= $\frac{0,01+0,01}{2}$ (3-2) = 0,01

$AUC_3^4$= $\frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5$= $\frac{0,01+0,005}{2}$ (5-4) = 0,0075

$AUC_5^6$= $\frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.065

**Replikasi II**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2$= $\frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3$= $\frac{0,02+0,015}{2}$ (3-2) = 0,0175

$AUC_3^4$= $\frac{0,015+0,015}{2}$ (4-3) = 0,015

$AUC_4^5$= $\frac{0,015+0,01}{2}$ (5-4) = 0,0125

$AUC_5^6$= $\frac{0,01+0,01}{2}$ (6-5) = 0,01

AUC total = 0.09875

**Replikasi III**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,025+0,015}{2}$ (2-1) = 0,02

$AUC_2^3 = \frac{0,015+0,01}{2}$ (3-2) = 0,0125

$AUC_3^4 = \frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5 = \frac{0,01+0,01}{2}$ (5-4) = 0,01

$AUC_5^6 = \frac{0,01+0,005}{2}$ (6-5) = 0,0075

AUC total = 0.07875

**Replikasi IV**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,025}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,025+0,015}{2}$ (2-1) = 0,02

$AUC_2^3 = \frac{0,015+0,01}{2}$ (3-2) = 0,0125

$AUC_3^4 = \frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5 = \frac{0,01+0,01}{2}$ (5-4) = 0,01

$AUC_5^6 = \frac{0,01+0,005}{2}$ (6-5) = 0,0075

AUC total = 0.078

**Replikasi V**

$AUC_0^{0,5} = \frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1} = \frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2 = \frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3 = \frac{0,02+0,02}{2}$ (3-2) = 0,02

$AUC_3^4 = \frac{0,02+0,02}{2}$ (4-3) = 0,02

$AUC_4^5 = \frac{0,02+0,015}{2}$ (5-4) = 0,0175

$AUC_5^6 = \frac{0,015+0,015}{2}$ (6-5) = 0,015

AUC total = 0.11625

**5. Dosis kombinasi II**

**Replikasi I**

$AUC_0^{0,5}$= $\frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1}$= $\frac{0,025+0,015}{2}$ (1-0,5) = 0,01

$AUC_1^2$= $\frac{0,015+0,01}{2}$ (2-1) = 0,0125

$AUC_2^3$= $\frac{0,01+0,01}{2}$ (3-2) = 0,01

$AUC_3^4$= $\frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5$= $\frac{0,01+0,01}{2}$ (5-4) = 0,01

$AUC_5^6$= $\frac{0,01+0,005}{2}$ (6-5) = 0,0075

AUC total = 0.06625

**Replikasi II**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,025}{2}$ (1-0,5) = 0,01375

$AUC_1^2$= $\frac{0,025+0,02}{2}$ (2-1) = 0,0225

$AUC_2^3$= $\frac{0,02+0,015}{2}$ (3-2) = 0,0175

$AUC_3^4$= $\frac{0,015+0,01}{2}$ (4-3) = 0,0125

$AUC_4^5$= $\frac{0,01+0,01}{2}$ (5-4) = 0,01

$AUC_5^6$= $\frac{0,01+0,005}{2}$ (6-5) = 0,0075

AUC total = 0.09125

**Replikasi III**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,02}{2}$ (1-0,5) = 0,0125

$AUC_1^2$= $\frac{0,02+0,01}{2}$ (2-1) = 0,015

$AUC_2^3$= $\frac{0,01+0,01}{2}$ (3-2) = 0,01

$AUC_3^4$= $\frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5$= $\frac{0,01+0,005}{2}$ (5-4) = 0,0075

$AUC_5^6$= $\frac{0,005+0,01}{2}$ (6-5) = 0,0075

AUC total = 0.07

**Replikasi IV**

$AUC_0^{0,5}$= $\frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1}$= $\frac{0,025+0,02}{2}$ (1-0,5) = 0,01125

$AUC_1^2$= $\frac{0,02+0,01}{2}$ (2-1) = 0,015

$AUC_2^3$= $\frac{0,01+0,005}{2}$ (3-2) = 0,0075

$AUC_3^4$= $\frac{0,005+0,005}{2}$ (4-3) = 0,005

$AUC_4^5$= $\frac{0,005+0,005}{2}$ (5-4) = 0,005

$AUC_5^6$= $\frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.05

**Replikasi V**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,02}{2}$ (1-0,5) = 0,0125

$AUC_1^2$= $\frac{0,02+0,015}{2}$ (2-1) = 0,0175

$AUC_2^3$= $\frac{0,015+0,015}{2}$ (3-2) = 0,015

$AUC_3^4$= $\frac{0,015+0,015}{2}$ (4-3) = 0,015

$AUC_4^5$= $\frac{0,015+0,01}{2}$ (5-4) = 0,0125

$AUC_5^6$= $\frac{0,01+0,005}{2}$ (6-5) = 0,0075

AUC total = 0.0875

**6. Dosis kombinasi III**

**Replikasi I**

$AUC_0^{0,5}$= $\frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1}$= $\frac{0,03+0,02}{2}$ (1-0,5) = 0,0125

$AUC_1^2$= $\frac{0,02+0,015}{2}$ (2-1) = 0,0175

$AUC_2^3$= $\frac{0,015+0,015}{2}$ (3-2) = 0,015

$AUC_3^4$= $\frac{0,015+0,005}{2}$ (4-3) = 0,01

$AUC_4^5$= $\frac{0,005+0,005}{2}$ (5-4) = 0,005

$AUC_5^6$= $\frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.0725

**Replikasi II**

$AUC_0^{0,5}$= $\frac{0+0,02}{2}$ (0,5-0) = 0,005

$AUC_{0,5}^{1}$= $\frac{0,02+0,01}{2}$ (1-0,5) = 0,0075

$AUC_1^2$= $\frac{0,01+0,005}{2}$ (2-1) = 0,0075

$AUC_2^3$= $\frac{0,005+0,05}{2}$ (3-2) = 0,005

$AUC_3^4$= $\frac{0,005+0,01}{2}$ (4-3) = 0,0075

$AUC_4^5$= $\frac{0,01+0,01}{2}$ (5-4) = 0,01

$AUC_5^6$= $\frac{0,01+0,01}{2}$ (6-5) = 0,01

AUC total = 0.0525

**Replikasi III**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,02}{2}$ (1-0,5) = 0,01125

$AUC_1^2 = \frac{0,02+0,01}{2}$ (2-1) = 0,015

$AUC_2^3 = \frac{0,01+0,01}{2}$ (3-2) = 0,01

$AUC_3^4 = \frac{0,01+0,005}{2}$ (4-3) = 0,0075

$AUC_4^5 = \frac{0,005+0,005}{2}$ (5-4) = 0,005

$AUC_5^6 = \frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.06

**Replikasi IV**

$AUC_0^{0,5} = \frac{0+0,025}{2}$ (0,5-0) = 0,00625

$AUC_{0,5}^{1} = \frac{0,025+0,015}{2}$ (1-0,5) = 0,01

$AUC_1^2 = \frac{0,015+0,01}{2}$ (2-1) = 0,0125

$AUC_2^3 = \frac{0,01+0,01}{2}$ (3-2) = 0,01

$AUC_3^4 = \frac{0,01+0,01}{2}$ (4-3) = 0,01

$AUC_4^5 = \frac{0,01+0,005}{2}$ (5-4) = 0,0075

$AUC_5^6 = \frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.06125

**Replikasi V**

$AUC_0^{0,5} = \frac{0+0,03}{2}$ (0,5-0) = 0,0075

$AUC_{0,5}^{1} = \frac{0,03+0,02}{2}$ (1-0,5) = 0,0125

$AUC_1^2 = \frac{0,02+0,015}{2}$ (2-1) = 0,0175

$AUC_2^3 = \frac{0,015+0,01}{2}$ (3-2) = 0,0125

$AUC_3^4 = \frac{0,01+0,005}{2}$ (4-3) = 0,0075

$AUC_4^5 = \frac{0,005+0,005}{2}$ (5-4) = 0,005

$AUC_5^6 = \frac{0,005+0,005}{2}$ (6-5) = 0,005

AUC total = 0.0675

**Lampiran 17. Hasil perhitungan % DAI**

**1. Kontrol positif natrium diklofenak**

Replikasi I = $\frac{0,16625-0,08125}{0,16625}$ x 100% = 51,12782%

Replikasi II = $\frac{0,23125-0,12125}{0,23125}$ x 100% = 47,56757%

Replikasi III = $\frac{0,15875-0,12125}{0,15875}$ x 100% = 23,62205%

Replikasi IV = $\frac{0,20375-0,10625}{0,20375}$ x 100% = 47,85276%

Replikasi V = $\frac{0,19875-0,08875}{0,19875}$ x 100% = 55,34591%

Rata-rata persen DAI = 45,10%

**2. Kontrol positif ekstrak rimpang kunyit**

Replikasi I = $\frac{0,16625-0,08125}{0,16625}$ x 100% = 51,12782%

Replikasi II = $\frac{0,23125-0,1275}{0,23125}$ x 100% = 44,86486%

Replikasi III = $\frac{0,15875-0,095}{0,15875}$ x 100% = 40,15748%

Replikasi IV = $\frac{0,20375-0,1175}{0,20375}$ x 100% = 42,33129%

Replikasi V = $\frac{0,19875-0,13625}{0,19875}$ x 100% = 31,44654%

Rata-rata persen DAI = 41,99%

**3. Dosis kombinasi I**

Replikasi I = $\frac{0,16625-0,065}{0,16625}$ x 100% = 60,90226%

Replikasi II = $\frac{0,23125-0,09875}{0,23125}$ x 100% = 57,2973%

Replikasi III = $\frac{0,15875-0,07875}{0,15875}$ x 100% = 50,3937%

Replikasi IV = $\frac{0,20375-0,07875}{0,20375}$ x 100% = 61,34969

Replikasi V = $\frac{0,19875-0,11625}{0,19875}$ x 100% = 41,50943%

Rata-rata persen DAI = 54,29%

**4. Dosis kombinasi II**

Replikasi I = $\frac{0,16625-0,06625}{0,16625}$ x 100% = 60,15038%

Replikasi II = $\frac{0,23125-0,09125}{0,23125}$ x 100% = 60,54054%

Replikasi III = $\frac{0,15875-0,07}{0,15875}$ x 100% = 55,90551%

Replikasi IV = $\frac{0,20375-0,055}{0,20375}$ x 100% = 73,00613%

Replikasi V = $\frac{0,19875-0,0875}{0,19875}$ x 100% = 55,97484%

Rata-rata persen DAI = 61,12%

**5. Dosis kombinasi III**

Replikasi I = $\frac{0,16625-0,0725}{0,16625}$ x 100% = 56,39098%

Replikasi II = $\frac{0,23125-0,0525}{0,23125}$ x 100% = 77,2973%

Replikasi III = $\frac{0,15875-0,06}{0,15875}$ x 100% = 62,20472%

Replikasi IV = $\frac{0,20375-0,06125}{0,20375}$ x 100% = 69,93865%

Replikasi V = $\frac{0,19875-0,0675}{0,19875}$ x 100% = 66,03774%

Rata-rata persen DAI = 66,37

**Lampiran 18. Hasil uji statistik total AUC antiinflamasi dengan metode karagenan**

**Uji shapiro wilk**

**Tests of Normality**

| | | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | kelompok | Statistic | df | Sig. | Statistic | df | Sig. |
| AUC | kontrol negatif | .206 | 5 | .200* | .938 | 5 | .652 |
| | natrium diklofenak | .230 | 5 | .200* | .878 | 5 | .301 |
| | ekstrak rimpang kunyit | .203 | 5 | .200* | .942 | 5 | .683 |
| | dosis kombinasi I | .269 | 5 | .200* | .938 | 5 | .651 |
| | dosis kombinasi II | .214 | 5 | .200* | .931 | 5 | .606 |
| | dosis kombinasi III | .178 | 5 | .200* | .981 | 5 | .940 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**Uji levene test**

**Test of Homogeneity of Variances**

AUC

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| 2.258 | 5 | 24 | .081 |

**Uji *one way* anova**

**ANOVA**

AUC

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .053 | 5 | .011 | 26.290 | .000 |
| Within Groups | .010 | 24 | .000 | | |
| Total | .063 | 29 | | | |

**Uji post hoc (tukey)**

**Multiple Comparisons**

Dependent Variable: AUC

Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| kontrol negatif | natrium diklofenak | .08800* | .01271 | .000 | .0487 | .1273 |
| | ekstrak rimpang kunyit | .08025* | .01271 | .000 | .0409 | .1196 |
| | dosis kombinasi I | .10425* | .01271 | .000 | .0649 | .1436 |
| | dosis kombinasi II | .11775* | .01271 | .000 | .0784 | .1571 |
| | dosis kombinasi III | .12900* | .01271 | .000 | .0897 | .1683 |
| natrium diklofenak | kontrol negatif | -.08800* | .01271 | .000 | -.1273 | -.0487 |
| | ekstrak rimpang kunyit | -.00775 | .01271 | .989 | -.0471 | .0316 |
| | dosis kombinasi I | .01625 | .01271 | .794 | -.0231 | .0556 |
| | dosis kombinasi II | .02975 | .01271 | .217 | -.0096 | .0691 |
| | dosis kombinasi III | .04100* | .01271 | .037 | .0017 | .0803 |
| ekstrak rimpang kunyit | kontrol negatif | -.08025* | .01271 | .000 | -.1196 | -.0409 |
| | natrium diklofenak | .00775 | .01271 | .989 | -.0316 | .0471 |
| | dosis kombinasi I | .02400 | .01271 | .433 | -.0153 | .0633 |
| | dosis kombinasi II | .03750 | .01271 | .068 | -.0018 | .0768 |
| | dosis kombinasi III | .04875* | .01271 | .009 | .0094 | .0881 |
| dosis kombinasi I | kontrol negatif | -.10425* | .01271 | .000 | -.1436 | -.0649 |
| | natrium diklofenak | -.01625 | .01271 | .794 | -.0556 | .0231 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | ekstrak rimpang kunyit | -.02400 | .01271 | .433 | -.0633 | .0153 |
| | dosis kombinasi II | .01350 | .01271 | .891 | -.0258 | .0528 |
| | dosis kombinasi III | .02475 | .01271 | .400 | -.0146 | .0641 |
| dosis kombinasi II | kontrol negatif | -.11775* | .01271 | .000 | -.1571 | -.0784 |
| | natrium diklofenak | -.02975 | .01271 | .217 | -.0691 | .0096 |
| | ekstrak rimpang kunyit | -.03750 | .01271 | .068 | -.0768 | .0018 |
| | dosis kombinasi I | -.01350 | .01271 | .891 | -.0528 | .0258 |
| | dosis kombinasi III | .01125 | .01271 | .946 | -.0281 | .0506 |
| dosis kombinasi III | kontrol negatif | -.12900* | .01271 | .000 | -.1683 | -.0897 |
| | natrium diklofenak | -.04100* | .01271 | .037 | -.0803 | -.0017 |
| | ekstrak rimpang kunyit | -.04875* | .01271 | .009 | -.0881 | -.0094 |
| | dosis kombinasi I | -.02475 | .01271 | .400 | -.0641 | .0146 |
| | dosis kombinasi II | -.01125 | .01271 | .946 | -.0506 | .0281 |

*. The mean difference is significant at the 0.05 level.

## Test homogenous subsets

**AUC**

Tukey HSD[a]

| | | Subset for alpha = 0.05 | | |
|---|---|---|---|---|
| kelompok | N | 1 | 2 | 3 |
| dosis kombinasi III | 5 | .0628 | | |
| dosis kombinasi II | 5 | .0740 | .0740 | |
| dosis kombinasi I | 5 | .0875 | .0875 | |
| natrium diklofenak | 5 | | .1038 | |
| ekstrak rimpang kunyit | 5 | | .1115 | |
| kontrol negatif | 5 | | | .1918 |
| Sig. | | .400 | .068 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

**Lampiran 19. Hasil uji statistik persen daya antiinflamasi (%DAI) dengan metode karagenan**

**Uji shapiro wilk**

**Tests of Normality**

| | | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | kelompok | Statistic | df | Sig. | Statistic | df | Sig. |
| DAI | natrium diklofenak | .379 | 5 | .018 | .781 | 5 | .057 |
| | ekstrak rimpang kunyit | .200 | 5 | .200* | .979 | 5 | .931 |
| | dosis kombinasi I | .240 | 5 | .200* | .879 | 5 | .306 |
| | dosis kombinasi II | .333 | 5 | .074 | .792 | 5 | .070 |
| | dosis kombinasi III | .126 | 5 | .200* | .997 | 5 | .998 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**Uji levene**

**Test of Homogeneity of Variances**

DAI

| Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|
| .440 | 4 | 20 | .778 |

**Uji *one way* anova**

**ANOVA**

DAI

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 2135.349 | 4 | 533.837 | 6.892 | .001 |
| Within Groups | 1549.216 | 20 | 77.461 | | |
| Total | 3684.565 | 24 | | | |

**Uji post hoc (Tukey)**

**Multiple Comparisons**

Dependent Variable: DAI

Tukey HSD

| (I) kelompok | (J) kelompok | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|
| natrium diklofenak | ekstrak rimpang kunyit | 3.11762 | 5.56636 | .979 | -13.5390 | 19.7742 |
| | dosis kombinasi I | -9.18725 | 5.56636 | .485 | -25.8439 | 7.4694 |
| | dosis kombinasi II | -16.01226 | 5.56636 | .063 | -32.6689 | .6444 |
| | dosis kombinasi III | -21.27066* | 5.56636 | .008 | -37.9273 | -4.6140 |
| ekstrak rimpang kunyit | natrium diklofenak | -3.11762 | 5.56636 | .979 | -19.7742 | 13.5390 |
| | dosis kombinasi I | -12.30488 | 5.56636 | .216 | -28.9615 | 4.3517 |
| | dosis kombinasi II | -19.12988* | 5.56636 | .020 | -35.7865 | -2.4733 |
| | dosis kombinasi III | -24.38828* | 5.56636 | .002 | -41.0449 | -7.7317 |
| dosis kombinasi I | natrium diklofenak | 9.18725 | 5.56636 | .485 | -7.4694 | 25.8439 |
| | ekstrak rimpang kunyit | 12.30488 | 5.56636 | .216 | -4.3517 | 28.9615 |
| | dosis kombinasi II | -6.82500 | 5.56636 | .737 | -23.4816 | 9.8316 |
| | dosis kombinasi III | -12.08340 | 5.56636 | .231 | -28.7400 | 4.5732 |
| dosis kombinasi II | natrium diklofenak | 16.01226 | 5.56636 | .063 | -.6444 | 32.6689 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | ekstrak rimpang kunyit | 19.12988* | 5.56636 | .020 | 2.4733 | 35.7865 |
| | dosis kombinasi I | 6.82500 | 5.56636 | .737 | -9.8316 | 23.4816 |
| | dosis kombinasi III | -5.25840 | 5.56636 | .876 | -21.9150 | 11.3982 |
| dosis kombinasi III | natrium diklofenak | 21.27066* | 5.56636 | .008 | 4.6140 | 37.9273 |
| | ekstrak rimpang kunyit | 24.38828* | 5.56636 | .002 | 7.7317 | 41.0449 |
| | dosis kombinasi I | 12.08340 | 5.56636 | .231 | -4.5732 | 28.7400 |
| | dosis kombinasi II | 5.25840 | 5.56636 | .876 | -11.3982 | 21.9150 |

*. The mean difference is significant at the 0.05 level.

## Uji homogeneous subsets

**DAI**

Tukey HSD[a]

| | | Subset for alpha = 0.05 | | |
|---|---|---|---|---|
| kelompok | N | 1 | 2 | 3 |
| ekstrak rimpang kunyit | 5 | 41.9856 | | |
| natrium diklofenak | 5 | 45.1032 | 45.1032 | |
| dosis kombinasi I | 5 | 54.2905 | 54.2905 | 54.2905 |
| dosis kombinasi II | 5 | | 61.1155 | 61.1155 |
| dosis kombinasi III | 5 | | | 66.3739 |
| Sig. | | .216 | .063 | .231 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.